



GAM-2818 \$

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Leonard Forbes et al.

Title: DEAPROM HAVING AMORPHOUS SILICON CARBIDE GATE INSULATOR

Docket No.: 303.354US2

Serial No.: 09/135,413

Filed: August 14, 1998

Due Date: N/A

Examiner: Unknown

Group Art Unit: Unknown

Assistant Commissioner for Patents
Washington, D.C. 20231

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GROUP 2100

We are transmitting herewith the following attached items (as indicated with an "X"):

- X A return postcard.
- X A Preliminary Amendment (4 Pages).
- X A check in the amount of \$186.00 to cover the fee for additional claims as calculated below.

If an additional fee is required due to changes to the claims, the fee has been calculated as follows:

| CLAIMS AS AMENDED | | | | | | |
|---|--|---|--|-------------------------|--------|----------|
| | (1) Claims Remaining After Amendment | | (2) Highest Number Previously Paid For | (3) Present Extra | Rate | Fee |
| TOTAL CLAIMS | 21 | - | 20 | 1 | x 22 = | \$22.00 |
| INDEPENDENT CLAIMS | 5 | - | 3 | 2 | x 82 = | \$164.00 |
| [] MULTIPLE DEPENDENT CLAIMS PRESENTED | | | | | | \$0.00 |
| TOTAL | | | | | | \$186.00 |

Please consider this a PETITION FOR EXTENSION OF TIME for sufficient number of months to enter these papers and please charge any additional required fees or credit overpayment to Deposit Account No. 19-0743.

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described above, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on this 15th day of October, 1998.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938, Minneapolis, MN 55402 (612-373-6900)

By: Edward J. Brooks, III
Atty: Edward J. Brooks, III
Reg. No. 40,925

(GENERAL)

10/23/1998 RMAGAT 00000110 09135413

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02 FC:103

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S/N 09/135,413

PATENT

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INSULATOR



PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

When the above-identified application is taken up for consideration, please amend the application as follows:

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IN THE CLAIMS

Please add claims 25-42 to the pending claim set. Claims 19-21 remain pending as well.

25. (New) A method of using a floating gate transistor having a floating gate and an adjacent amorphous silicon carbide (a-SiC) insulator, comprising:

providing current conduction between the floating gate and the insulator at lower applied voltages than required for a polysilicon floating gate-SiO₂ insulator interface.

26. (New) The method of claim 25, wherein providing the current conduction between the floating gate and the insulator includes the technique of hot electron injection.

27. (New) The method of claim 25, wherein providing the current conduction between the floating gate and the insulator includes the technique of Fowler-Nordheim tunneling.

28. (New) A method of using a floating gate transistor, comprising:

programming a floating gate of the transistor by placing a charge on the floating gate, wherein the transistor has a barrier energy, defined as the difference between the electron affinity of the floating gate and the electron affinity of an insulator separating the floating gate from a substrate, which is less than approximately 3.3 eV; and